

Canon

Imaging Equipment

What are the imaging equipment?



Copiers, Digital Duplicators, Multifunction Devices

Copiers:

- Technology: Electrophotography, Direct Thermal, Solid Ink, Thermal Transfer*
- Digital or analog technology*
- Color and monochrome capability*
- Key features: Copying*

Digital Duplicators:

- Technology: Stencil*
- Color and monochrome capability*
- Key features: Duplicating*

Multifunction Devices:

- Technology: similar to copiers*
- Color and monochrome capability*
- Key features: Copy, Print, Scan, Fax*



Printers, Facsimile Machines and Scanners

Printer:

- Technology: Electrophotography, Inkjet, Impact, Solid Ink, Thermal Transfer, Direct Thermal*
- Monochrome and Color capability*
- Key Features: Printing from computers, single or networked, or devices such as digital camera, flashcards etc.*

FAX machine:

- Technology: Electrophotography, Inkjet, Thermal Transfer, Direct Thermal*
- Monochrome and Color capability*
- Key Features: Transmitting and receiving electronic transmissions via a public telephone line, computer or internet*

Scanner:

- Technology: Charge Coupled Device, Contact Image Sensor*
- Monochrome or Color capability*
- Key Features: Converting hard copy originals into electronic images*



Imaging Technologies

■ *Electrophotography:*

- *Uses powdered toner to develop image*
- *Image formed by electrostatic charge differential between image drum, toner and paper, image is fixed by fusing toner to paper.*
- *Inputs: energy, toner, paper*
- *Residuals: toner container, paper waste (e.g. paper and packaging)*

■ *Solid Ink:*

- *Uses hot melt solid ink sticks to develop the image*
- *Image formed by transfer of melted ink to image drum then offset onto paper. Image is fixed by contact cooling on paper*
- *Inputs: energy, ink sticks, paper*
- *Residuals: ink stick container, paper waste*

Imaging Technologies

■ *Ink Jet*

- *Uses liquid ink to develop image*
- *Image formed by selectively heated bank of ink nozzles, causes bubble formation which ejects droplet of ink, image fixed by absorption and evaporation*
- *Inputs: energy, ink, paper*
- *Residuals: spent ink cartridge, paper waste*

■ *Impact*

- *Uses inked ribbon to develop image*
- *Image formed by impact of print head on inked ribbon mechanically transferred to paper in the form of dot matrix. Image fixed by absorption and either oxidation or evaporation*
- *Inputs: energy, ink ribbon, paper*
- *Residuals: spent ink ribbon cartridge, paper waste*

Imaging Technologies

■ *Stencil*

- *Uses liquid ink to develop the image*
- *Digitized image is translated into perforations on a paper “plate” (stencil master), the image is transferred to paper by pressing ink through the perforations in the master image, image fixed by absorption and evaporation*
- *Inputs: energy, ink, image “master” material , paper*
- *Residuals: spent ink container, paper waste*

■ *Thermal Transfer*

- *Uses hot melt ink with ribbon backing to develop the image*
- *Image formed by heat transferred by print head to ink coated ribbon which melts onto paper, image fixed by contact cooling of ink*
- *Inputs: energy, ink coated ribbon, paper*
- *Residuals: spent ribbon cartridge, paper waste*

Imaging Technologies

■ *Direct Transfer (Direct Thermal Transfer)*

- *Uses heat sensitive substrate to develop the image*
- *Image formed by paper contact with heated print head, heated surface darkens to create image, image instantly fixed by oxidation/chemical reaction*
- *Inputs: energy, thermal sensitive paper*
- *Residuals: waste paper*



Thank You !!